COQUITLAM COLLEGE
Established 1982

COURSE OUTLINE

Effective: Fall 2024

Effective January 1, 2026: This course is no longer offered.

COURSE INFORMATION

Course Title: Weather and Climate

Course Number: GEOG 101 **Credits:** 3

Total Weeks: 14 (Fall, Spring)
12 (Summer)

Total Hours: 39

Course Level: ☒ First Year ☐ Second Year
☐ New ☐ Revised Course
☐ Replacement Course

Department: Social Sciences **Department Head**: A. McDougall

Former Course Code(s) and Number(s) (if applicable): N/A

Pre-requisites (If there are no prerequisites, type NONE): NONE

Co-requisite Statement (List if applicable or type NONE): NONE

Precluded Courses: N/A

COURSE DESCRIPTION

This course is an introduction to the study of the elements and processes of the atmosphere and atmospheric circulation which produce variations in weather and climate locally and around the globe. In addition, the hydrosphere which includes the interrelationships between water, weather and climate systems will be studied. The aim of this course is to develop an understanding of the interrelationships of these systems and their impact on the biosphere and lithosphere where most human activities take place. The course involves lectures, laboratory work, assignments, exams, and field trips.

LEARNING OUTCOMES

Upon successful completion of the course, students will be able to:

- Understand the geographical tradition and the various methods geographers use to describe the world around them.
- Understand basic weather systems and impact of climate change on these systems.
- Understand human impacts on the environment discussing topics such as economic development, population, urbanization.
- Develop your critical thinking abilities by reading and writing about a variety of issues at an academic level.
- Appreciate how a geographical perspective enriches and complicates one's understanding of living in the world today.

INSTRUCTION AND GRADING

Instructional (Contact) Hours:

Type	Duration
Lecture	26
Seminars/Tutorials	
Laboratory	13
Field Experience	
Other (*specify):*	
Total	39

Grading System: Letter Grades ☒ Percentage ☐ Pass/Fail ☐ Satisfactory/Unsatisfactory ☐ Other ☐

Specify passing grade: 50%

Evaluation Activities and Weighting (total must equal 100%)

Assignments: %	Lab Work: 16%	Participation: 4% *Specify nature of participation:*	Project: 15% *Specify nature of project:* Weather Journal
Quizzes/Test: 25%	Midterm Exam: 15%	Final Exam: 25%	Other: %

TEXT(S) AND RESOURCE MATERIALS

Provide a full reference for each text and/or resource material and include whether required/not required.

Christopherson, R., Birkeland, G., Byrne, M. and P. Giles, 2018: Geosystems: An Introduction to Physical Geography, Updated Fourth Canadian Edition. Pearson Canada Inc., North York, Ontario, Canada, 669 pages.

COURSE TOPICS

List topics and sequence covered.

Week	Topic
Week 1	Class overview; shape of earth; latitude and longitude
Week 2	Essentials of geography; earth's atmospheric; composition; Atmospheric pressure and density
Week 3	Atmospheric layers; electromagnetic radiation; basics; inverse-square law
Week 4	Atmosphere and surface energy balances
Week 5	Temperature; water and atmospheric moisture; relative humidity
Week 6	Moisture effects on temperature
Week 7	Project Workshop **MIDTERM EXAM**
Week 8	Atmospheric circulation; seasons
Week 9	Air parcel basics; atmospheric stability; lapse rates
Week 10	Weather: clouds and orographic precipitation
Week 11	Weather systems
Week 12	Climate change
Week 13	Catch up / Review for final exam

Week 14	**FINAL EXAM**

NOTES

1. Students are required to follow all College policies. Policies are available on the website at: Coquitlam College Policies
2. To find out how this course transfers, visit the BC Transfer Guide at: bctransferguide.ca

Last Revised: September 2024
Last Reviewed: September 2024